

CLAIMS

1. A paper sheet treating device comprising:

a sheet table;

an aftertreatment mechanism including one of a punching
5 device for punching a paper sheet on the sheet table and a
stapler for stapling the sheet on the sheet table, wherein
the aftertreatment mechanism performs an aftertreatment of
one of a punching operation and a stapling operation;

a closing type fence positioned at a leading end on a
10 downstream side of the sheet table; and

a pair of feed rollers disposed upstream of the closing
type fence and including an upper roller positioned on an obverse
side of the sheet and a lower roller positioned on a reverse
side of the sheet,

15 wherein the feed rollers position the sheet on the sheet
table by pushing the sheet onto the closing type fence, and

the closing type fence is opened after the aftertreatment
to discharge the sheet.

20 2. The paper sheet treating device according to claim 1,
wherein the feed rollers are mounted on a spindle through a
torque limiting mechanism, and

when a leading end of the sheet on the sheet table abuts
against the closing type fence, a rotation of the feed rollers
25 is stopped by a torque limiting action while applying a forward
force to the sheet, and the sheet is held while being pushed

onto the closing type fence.

3. The paper sheet treating device according to claim 2,
wherein the torque limiting mechanism includes sliding clutches.

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4. The paper sheet treating device according to claim 1,
wherein the feed rollers include two rollers arranged at a
spacing in a direction perpendicular to a sheet feeding
10 direction.

5. The paper sheet treating device according to claim 1,
further comprising:

a pair of positioning plates disposed on right and left
15 sides of the sheet table and capable of widening/narrowing
their mutual spacing,

wherein the pair of positioning plates interpose the sheet
on the sheet table from the right and left sides so as to position
the sheet transversely.

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6. The paper sheet treating device according to claim 5,
further comprising:

a sheet feed roller opening control mechanism, wherein
the sheet feed roller opening control mechanism releases a
25 pressure on the sheet, when a spacing of the positioning plates
narrows, and presses the sheet after an end of the narrowing

of the positioning plates.

7. The paper sheet treating device according to claim 1,
wherein actions of the sheet feed mechanism, the aftertreatment
5 mechanism, the closing type fence and the feed rollers are
overlapped in a time scale.

8. The paper sheet treating device according to claim 1,
further comprising:

10 a rotary flap disposed on an upstream end of the sheet
table, wherein the rotary flap rotates to cover an upper face
of an trailing end of the sheet when the sheet is fed onto
the sheet table.

15 9. The paper sheet treating device according to claim 1,
wherein the punching device includes:

a die;

a punch that moves upward and downward with respect to
the die fixed, for punching the sheet;

20 a punch lifting mechanism; and

a spring for biasing the punches toward the die,

wherein a punch driving force by the punch lifting mechanism
and a spring force of the spring coact to punch the sheet.

25 10. The paper sheet treating device according to claim 9,
wherein the punch lifting mechanism includes:

a motor;
a crankshaft driven by the motor; and
a link for connecting a crank pin of the crankshaft and
the punches.

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11. The paper sheet treating device according to claim 9,
wherein the punching device further includes:

a click stop mechanism for holding the punches at standby
positions.

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12. The paper sheet treating according to claim 11, wherein
the click stop mechanism includes:

a disc cam having a groove formed in its outer circumference
and mounted on the crankshaft; and

15 one of a roller and a pawl for making elastic contact
with the groove.

13. The paper sheet treating device according to claim 1,
further comprising:

20 a sheet positioning mechanism for correcting a transverse
position of the sheet,

wherein the punching device includes:

a punching device body;

a punching unit removably mounted on the punching device
25 body and having a punch and a die assembled in the punching
unit;

a positional deviation information storage unit disposed in the punching unit for storing a positional deviation information on the punch and the die in a transverse directions; and

5 a read unit disposed in the punching device body for reading the positional deviation information,

wherein the sheet positioning mechanism corrects the transverse position of the sheet in accordance with the positional deviation information read.

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14. The paper sheet treating device according to claim 13, wherein the sheet positioning mechanism includes:

a reference positioning unit; and

15 a movable positioning unit for pushing the sheet toward the reference positioning unit,

wherein the position of the reference positioning unit is corrected according to the positional deviation information read.

20 15. The paper sheet treating device according to claim 13, wherein the positional deviation information storage unit includes one or more dip switches.

16. The paper sheet treating device according to claim 13,
25 wherein the positional deviation information storage unit includes a nonvolatile memory.